

Date: Monday, 7/9/2007 11:52:58 AM
 User: Kim Johnston

Process Sheet

3

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : 350 SKIDTUBE ASSEMBLY RH
 Job Number : 33394
 Estimate Number : 10268
 P.O. Number : N/A
 This Issue : 7/9/2007 S.O. No. : N/A
 Prsht Rev. : NC
 First Issue : N/A Type : LANDING GEAR
 Previous Run : 33393
 Part Number : D350636014
 Drawing Number : D2750-UNDER REVIEW CB
 Project Number : N/A
 Drawing Revision : D
 Material : N/A
 Due Date : 7/30/2007 Qty: 1 Um: Each
 Written By :
 Checked & Approved By : 07.07.09
 Comment : Est Rev: H 02.09.25 Rearranged procedure steps KJ
 Est Rev: I 05.12.08 Rearranged procedure steps EC
 Est Rev: J 06.03.30 Per rev. D EC

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description:

1.0 DC DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Photocopy blue file and type labels per PPP D350-636-014 CHG 002

2.0 D26003BENT Extrusion Bent



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D2600-3-Bent

Extrusion (Bent)

B 32948

7-8-9

3.0 D2744 Fwd Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Cap:

Batch:

B 32584

BE 7-8-9 7-9-28

4.0 LANDING GEAR 1 LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1- Mark cut line on aft end of D2600-3-Bent using Jig DT 8150. Cut to length as per Dwg D2750. Deburr end

2- Drill pilot holes as per Dwg D2750 sheet 3 (D2750-1 details). Drill using drill Jig DT8150 & DT8864 drilling holes labelled "B" only.

3- Mark fwd end for cutting using Drill Jig DT 8150 & DT8864 and cut

7-8-9
 (P10) →

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: 12 Date: 07/10/09
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
07/08/07	4.2	hole 20th from the aft was opened on one side to $\phi 3.75$ instead of $\phi 3.13$. R.L. human error	<i>[Signature]</i>	install/weld cross bolt spacer and center cross bolt in hole	BE 7/10/15	<i>[Signature]</i> 07/10/15	<i>[Signature]</i> 07/10/15	<i>[Signature]</i> 07/10/15

NOTE: Date & initial all entries

Date: Monday, 7/9/2007 11:52:58 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 350 SKIDTUBE ASSEMBLY RH

Job Number: 33394

Part Number: D350636014

Job Number:



Seq. #:

Machine Or Operation:

Description :

as per dwg D2750.

4-Drill pilot holes for Detail B using DT8330

5-Open up holes for Detail B, "hole size W" and blade fitting location holes to 0.500" (total of 9 holes per side) as per dwg D2750.

6-Drill pilot holes for wearplates as per Dwg D2750 using DT8108 and open to 0.250" ***Make sure that wearplate holes are on bottom of tube*****

7-Open up holes of Detail A to 0.250" (total of 2 holes per side)

8- Countersink all fwd wearshoe holes (total of 19 holes per side) DO NOT C'SINK THE LAST AFT HOLES (total of 2 per side for blade fitting) as per dwg D2750.

9-Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left from bending as per QSI 004
A/R Aluminum Rod *m 10538 BE 07-09-28*

10-Grind welds flush as per Dwg D2750

11-Countersink Detail A as per dwg D2750.

5.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

6.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

8.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

9.0

D2739

350 I Beam



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Web

Batch:

B 32874 ① 7-10-4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 7/9/2007 11:52:58 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 350 SKIDTUBE ASSEMBLY RH

Job Number: 33394

Part Number: D350636014

Job Number:



Seq. #:

Machine Or Operation:

Description :

10.0

D34901

CROSS BOLT SPACER



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Crossbolt spacer

Batch: B33824 BE 07/10/15

11.0

D34905

CROSS BOLT SPACER



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Crossbolt spacer

Batch: B32597 BE 07/10/15

12.0

D2743

Crossbolt Spacer



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

Crossbolt Spacer

Batch: B32656 BE 07/10/15

13.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Open up holes "size X" (total of 4 holes per side) as per dwg D2750

2-Open up holes of Detail V & Detail C to 0.625" (total of 8 holes per side)
as per dwg D2750.

3-Chamfer holes of Detail V, Detail C, hole size "W" and "X" per dwg D2750 (welding instructions on sheet 5)

4-Deburr and blow out all chips from inside of tube

5-Bond web D2739 in place as per QSI 015

A/R

Sikaflex-291

batch: M105586

exp. date: 8-7-1

6- Weld spacers D3490-1, D3490-5 and D2743 as per dwg D2750 & QSI004
(welding instructions on sheet 5)

A/R

Aluminum Rod

batch: M105058 BE 07/10/15

7-Grind welds flush as per Dwg D2750

SL/H 7-10-16

7-10-9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 7/9/2007 11:52:58 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 350 SKIDTUBE ASSEMBLY RH

Job Number: 33394

Part Number: D350636014

Job Number:



Seq. #:

Machine Or Operation:

Description :

10-Spot face ground handling holes section J-J (total of 4 places per side) as per dwg D2750

U 7-10-16

11-Deburr holes

SL/U 7-10-16

14.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

PD 07-10-17 ①

15.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

U 07-10-17

16.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat Gloss White (Ref. 4.3.5.1) as per Dart QSI 005 4.3

BL 07-10-23

①

17.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

Inspect for foreign object per QSI 024

07-10-24

①

18.0

NAS1330S3KB166

INSERT



Comment: Qty.: 42.0000 Each(s)/Unit Total : 42.0000 Each(s)

INSERT

Batch: M 103954

SL

19.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

1-Install inserts as per dwg D2750

SL

20.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Inspect Inserts

U 07-10-24

MS 07-10-24 ①

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 7/9/2007 11:52:58 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 350 SKIDTUBE ASSEMBLY RH

Job Number: 33394

Part Number: D350636014

Job Number:



Seq. #:

Machine Or Operation:

Description :

21.0

D26483

Wearpad



Comment: Qty.: 5.0000 Each(s)/Unit Total : 5.0000 Each(s)

Wearpad

Batch: B33059

Handwritten initials

22.0

D265613

Wearplate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Wearplate

Batch: B31889

Handwritten initials

23.0

D265635

Wearplate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Wearplate

Batch: B29337

Handwritten initials

24.0

D2746

Wearshoe



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Wearplate

Batch: B32991

Handwritten initials

25.0

D2745

Bushing



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

Bushing

Batch: B30817

Handwritten initials

26.0

D3488042

BLADE FITTING ASSEMBLY, RH



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Blade Fitting, LH

Batch: B32233

Handwritten initials

27.0

D3492041

PLUG ASSEMBLY



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

PLUG ASSEMBLY

Batch: B32996

Handwritten initials

07-10-24

Handwritten mark

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 7/9/2007 11:52:58 AM

User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 350 SKIDTUBE ASSEMBLY RH

Job Number: 33394

Part Number: D350636014

Job Number:



Seq. #:

Machine Or Operation:

Description :

28.0

D3492045

PLUG ASSEMBLY



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)
PLUG ASSEMBLY (4x) 1329871
Batch: B302594 JS

29.0

AN3C5A

Bolt



Comment: Qty.: 38.0000 Each(s)/Unit Total : 38.0000 Each(s)
Bolt
Batch: M105906 JS

30.0

AN3C6A

BOLT



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)
Bolt
Batch: M105057 JS

31.0

AN3C7A

BOLT



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)
BOLT
Batch: M103668 JS

32.0

AN6C44A

BOLT



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)
BOLT
Batch: M104937
M105906 JS

33.0

AN8C35A

BOLT



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)
BOLT
Batch: M102671 JS

34.0

AN960C10L

washer



Comment: Qty.: 46.0000 Each(s)/Unit Total : 46.0000 Each(s)
washer
Batch: M105906 JS

07-10-24 JS

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 7/9/2007 11:52:58 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 350 SKIDTUBE ASSEMBLY RH

Job Number: 33394

Part Number: D350636014

Job Number:



Seq. #:

Machine Or Operation:

Description :

35.0

AN960C816L

WASHER



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

WASHER

Batch: M105408

JK

36.0

MS210436

NUT



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

NUT

Batch: M103693

JK

37.0

MS21083C8

NUT



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

NUT

Batch: M104625

JK

38.0

NAS1515H3L

WASHER



Comment: Qty.: 46.0000 Each(s)/Unit Total : 46.0000 Each(s)

WASHER

Batch: M105408 *

JK

39.0

NAS1515H8L

WASHER



Comment: Qty.: 10.0000 Each(s)/Unit Total : 10.0000 Each(s)

WASHER

Batch: M105430

JK

40.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

4A 08-10-24 ①

1-Assemble tube hardware as per dwg D2750

sikaflex batch: M105585 08-07

2-Inspect For Foreign Objects

3-Spray inside of tube with "LPS-3" batch: M105005

4-Install blade fitting D3488-041, wearshoe

SIKA FLEX 241

BATCH: M105585

JK 08-10-24 ①

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 7/9/2007 11:52:58 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 350 SKIDTUBE ASSEMBLY RH

Job Number: 33394

Part Number: D350636014

Job Number:



Seq. #:

Machine Or Operation:

Description :

EXP DATE: 08-07

5-Coat all exposed fasteners with "LPS Procyon"

batch: M1104251

07-10-24 0

41.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

07/10/04

42.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

43.0

D2741

Blade



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Blade

Batch: ~~D2741~~ B 33083

AS

44.0

AN960C816L

WASHER



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Washer

Batch: M104093

AS

45.0

MS21083C8

NUT



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Nut

Batch: M104625

AS

46.0

AN8C21A

BOLT



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Bolt

Batch: M101605

AS

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: D Date: 01/10/09
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 7/9/2007 11:52:58 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 350 SKIDTUBE ASSEMBLY RH

Job Number: 33394

Part Number: D350636014

Job Number:



Seq. #:

Machine Or Operation:

Description :

47.0

NAS1515H8L

WASHER



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

WASHER

Batch: B104955

AS

48.0

D34931

WASHER



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

WASHER

Batch: B32877

AS

49.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

10-29

50.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Package as per PPP D350-636-014

Rev F 7/10/29

(17)

SP

51.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

(1) 10/10/29

Job Completion



10-29

B 33394

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



RELEASED
06.02.07

UNDER REVIEW

07.01.05 CB

add gaskets
change to SS wear plates

DESIGN PH	DRAWN BY PH	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D2750	REV. D SHEET 1 OF 5
DATE 06.01.05		TITLE 350 SKIDTUBE ASSEMBLY	SCALE NTS
A	98.04.16	NEW ISSUE	
B	98.09.01	CHANGE MS24694-S293 TO AN8-16A	
C	98.11.18	ADD D2750-3/D2750-4 INCORPORATE D2738 AND D2740	
D	06.01.05	ADD HOLES AND SPACERS FOR APICAL FLOATS INCORPORATE DEO 9133/9157	

Qty -041	Qty -042	Qty -043	Qty -044	Part Number	Description
X				D2750-041	SKIDTUBE ASSEMBLY, LH
	X			D2750-042	SKIDTUBE ASSEMBLY, RH
		X		D2750-043	SKIDTUBE ASSEMBLY, LH
			X	D2750-044	SKIDTUBE ASSEMBLY, RH
5	5	5	5	D2648-3	WEARPAD
1	1	1	1	D2656-13	WEARSHOE
1	1	1	1	D2656-35	WEARSHOE
1	1	1	1	D2746	WEARSHOE
1	1	1	1	D2739	WEB
1	1	1	1	D2741	BLADE
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
38	38	38	38	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN3C7A	BOLT
4	4	4	4	AN6C44A	BOLT
2	2	2	2	AN8C21A	BOLT
1	1	1	1	AN8C35A	BOLT
46	46	46	46	AN960C10L	WASHER
4	4	4	4	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
3	3	3	3	MS21083C8	NUT
42	42	42	42	NAS1330S3KB166	INSERT
46	46	46	46	NAS1515H3L	WASHER
12	12	12	12	NAS1515H8L	WASHER

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 33394

Copyright © 1998 by DART AEROSPACE USA, INC.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.



DESIGN PH	DRAWN BY PH	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED PH	APPROVED PH	DRAWING NO. D2750	REV. 0 SHEET 2 OF 5
DATE 06.01.05		TITLE 350 SKIDTUBE ASSEMBLY	SCALE NTS

UNDER REVIEW

07-01-05 CB

35 wearplates

OK
CB

RELEASED
06-02-07

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN INCHES
2. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
3. MAKE FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
4. DAMAGE TOLERANCE ON BENDING:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 12 INCHES ABOVE THE GROUND. NO GOUGING IS ACCEPTABLE IN THE FLAT PORTION OF THE TUBE. GOUGES UP TO 0.020 ARE ACCEPTABLE IN THE BENT PORTION OF THE TUBE. TUBE O.D. SHOULD BE 3.150 ± 0.010 IN THE FLAT PORTION OF THE TUBE. TUBE O.D. SHOULD BE 3.15 ± 0.030 IN THE BENT PORTION OF THE TUBE.
5. ALL HOLES DRILLED ON CENTERLINES EXCEPT THOSE NOTED BY SECTIONS E-E, F-F, AND R-R.
6. WELDING TO BE DONE PER DART QSI 004.
7. FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 ksi
MINIMUM ULTIMATE TENSILE STRENGTH = 38 ksi
8. FINISH:
ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
9. INSTALL NAS1330S3KB166 INSERTS AFTER FINISH AS INDICATED IN D2750-1/-2/-3/-4 WELDING DETAIL ON PAGE 4 AND 5. DRILL 'E' SIZE HOLES ($\emptyset 0.250$ - $\emptyset 0.257$) FOR WEARSHOE INSERTS. C'SINK $\emptyset 0.391 \times 100^\circ$ AND INSTALL INSERTS
10. D3488-041 (OR D3488-042) BLADE FITTING AND AN3-5A/AN3-7A WEARSHOE SCREWS TO BE INSTALLED USING SIKAFLEX-241 (OR EQUIVALENT) SEALANT.
11. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
12. APPLY A LAYER OF SIKAFLEX -241/-291 ADHESIVE BETWEEN THE BOTTOM OF THE SKIDTUBE ASSEMBLY AND THE WEARPLATES

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
33394

Copyright © 1998 by DART AEROSPACE USA, INC.

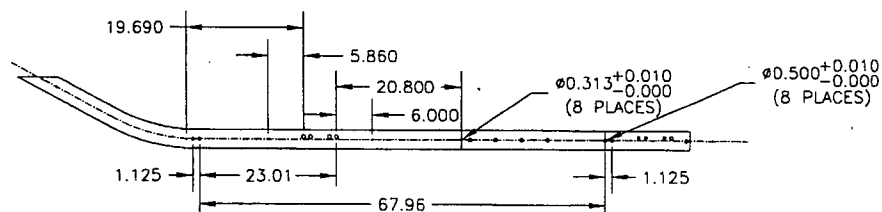
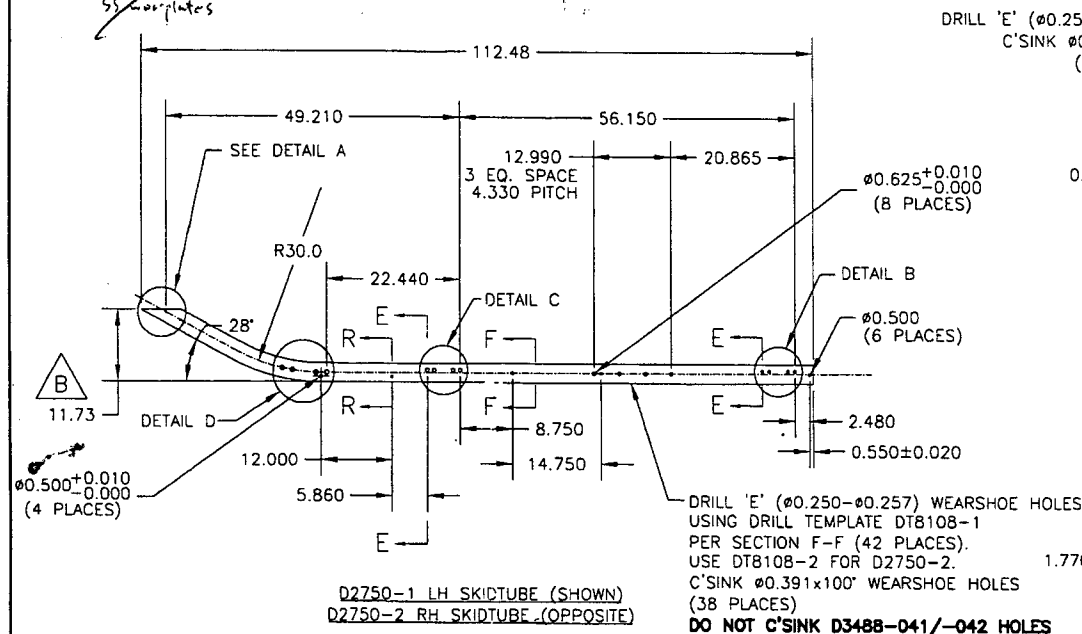
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

UNDER REVIEW

OK
CB

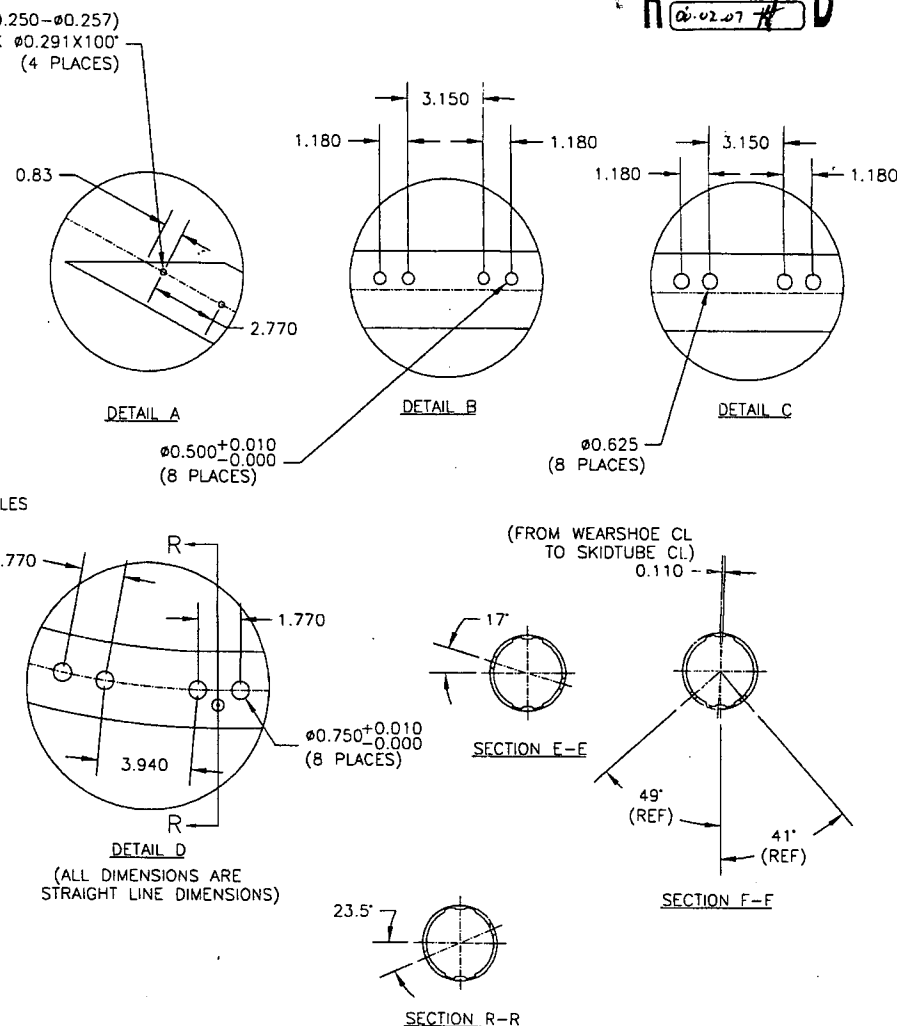
07.01.65 (18)
55 Composites

RELEASED
06-02-07



D2750-3 LH SKIDTUBE (SHOWN)
D2750-4 RH SKIDTUBE (OPPOSITE)

D2750-3/-4 AND D2750-1/-2 HAVE THE SAME SADDLE AND
GROUND HANDLING HOLES



NO. 33394
WORK ORDER
WITHOUT NOTICE
SUBJECT TO AGREEMENT
UNCONTROLLED COPY
ENGINEERING
RETURN TO
SHOP COPY

COPYRIGHT © 1988 BY DART AEROSPACE USA, INC.		DESIGN PH	DRAWN BY PH	DART AEROSPACE USA, INC. PORT HADLOCK, MA	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.		CHECKED #	APPROVED #	DRAWING NO. D2750	REV. D SHEET 3 OF 5
DATE 06.01.05		TITLE 350 SKIDTUBE ASSEMBLY			SCALE 1:20

UNDER REVIEW

07.07.05 CB

OK CB

SEE DET. Q

DETAIL G

INSTALL NAS1330S3KB166
WEARSHOE INSERTS (38 PLACES)
AFTER FINISH

RELEASED
06.02.07 #

INSTALL NAS1330S3KB166
INSERTS (4 PLACES)
AFTER FINISH

D2750-041/-042 ASSEMBLY
D2750-041 SHOWN (D2750-042 OPPOSITE)

BOND D2739 WEB INTO D2750-1 (OR D2750-2)
OUTER TUBE WITH NON-STRUCTURAL
SIKAFLEX-241 ADHESIVE PER DART QSI 015.
NOTE: ENSURE THAT HOLES LINE UP.

SEE DET. P
SEE DET. N
D3488-041
(OR D3488-042)

BLACK ANTI-SKID

SEE DET. M

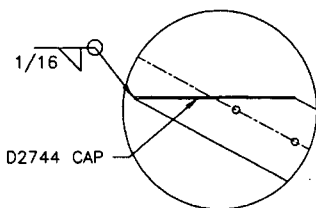
D2741

NO INSERT

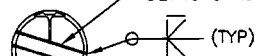
WELDED SPACER
NOT REQUIRED

SEE DET. K

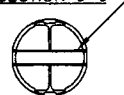
DETAIL G



SECTION H-H D2743 SPACER (REF)



SECTION J-J



WELDING INSTRUCTIONS

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2743 SPACER
3. WELD INTO PLACE
4. GRIND FLUSH
5. DRILL OUT SPACER TO Ø0.484
6. SPOT FACE Ø0.750 (SECTION J-J ONLY)

SECTION L-L

D3490-3 SPACER (TYP)

Ø0.750 HOLES ONLY

D3492-043 PLUG ASSEMBLY

SECTION S-S

D3490-1 SPACER (TYP)

Ø0.500 HOLES ONLY

D3492-041 PLUG ASSEMBLY

WELDING INSTRUCTIONS

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D3490-1 SPACER (4 PLACES) INTO Ø0.500 HOLES OR INSERT D3490-3 SPACER (4 PLACES) INTO Ø0.750 HOLES
3. WELD INTO PLACE
4. GRIND FLUSH
5. INSERT D3492-041 PLUG ASSEMBLY (8 PLACES) INTO D3490-1 SPACER OR INSERT D3492-043 PLUG ASSEMBLY (8 PLACES) INTO D3490-3 SPACER ON BOTH ENDS

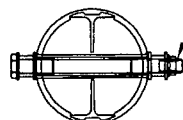
DETAIL K

USE AN3C7A BOLTS
FOR INSTALLING AFT
D2648-3 WEARPAD
(4 PLACES)



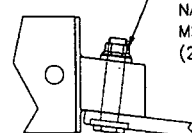
AN3C5A BOLT (1)
AN960JD10L WASHER (1)
NAS1515H3L WASHER (1)
(38 PLACES)

DETAIL M



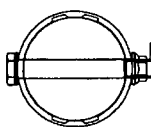
AN6-44A BOLT (1)
D2745 BUSHING (2)
NAS1515H8L WASHER (2)
MS21043-6 NUT (1)
(4 PLACES)
NOTE: INSTALL WASHER BETWEEN
SKIDTUBE AND BUSHING

DETAIL N



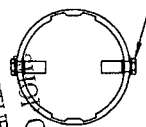
AN8C21A BOLT (1)
AN960JD816L WASHER (1)
NAS1515H8L WASHER (1)
MS21083C8 NUT (1)
(2 PLACES)

DETAIL P



AN8C35A BOLT (1)
AN960C816L WASHER (2)
NAS1515H8L WASHER (2)
MS21083C8 NUT (1)
(4 PLACES)

DETAIL Q



AN3C6A BOLT (1)
AN960C10L WASHER (1)
NAS1515H3L WASHER (1)
(4 PLACES)

COPYRIGHT © 1998 BY DART AEROSPACE USA, INC.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL
AND IS SUPPLIED ON THE EXPRESS CONDITION
THAT IT IS NOT TO BE USED FOR ANY PURPOSE
OR COPIED OR COMMUNICATED TO ANY OTHER
PERSON WITHOUT WRITTEN PERMISSION FROM
DART AEROSPACE USA, INC.

DESIGN R4	DRAWN BY R4	DART DART AEROSPACE USA, INC. PORT WADSWORTH, OH
CHECKED #	APPROVED #	DRAWING NO. D2750
DATE 06.01.05	TITLE 350 SKIDTUBE ASSEMBLY	REV. 0 SHEET 4 OF 5 SCALE 1:20

NO. 33394
WORK ORDER
RETURN TO
ENGINEERING
CONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE

UNDER REVIEW

01.02.85 CB

ok CB

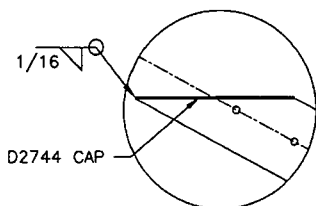
SEE DET. Q

DETAIL G

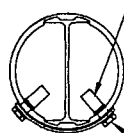
INSTALL NAS1330S3KB166
WEARSHOE INSERTS (38 PLACES)
AFTER FINISH

RELEASED
06.02.87

DETAIL G



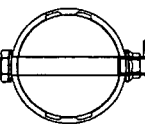
DETAIL K



USE AN3C7A BOLTS
FOR INSTALLING AFT
D2648-3 WEARPAD
(4 PLACES)

AN3C5A BOLT (1)
AN960C10L WASHER (1)
NAS1515H3L WASHER (1)
(38 PLACES)

DETAIL P



AN8C35A BOLT (1)
AN960C816L WASHER (2)
NAS1515H8L WASHER (2)
MS21083C8 NUT (2)

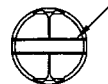
SECTION H-H



D2743 SPACER (REF)

(TYP)

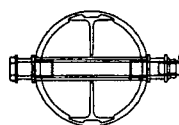
SECTION J-J



WELDING INSTRUCTIONS

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2743 SPACER
3. WELD INTO PLACE
4. GRIND FLUSH
5. DRILL OUT SPACER TO Ø0.484
6. SPOT FACE Ø0.750 (SECTION J-J ONLY)

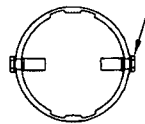
DETAIL M



AN6C44A BOLT (1)
D2745 BUSHING (2)
NAS1515H8L WASHER (2)
MS21043-6 NUT (1)
(4 PLACES)

NOTE: INSTALL WASHER BETWEEN
SKIDTUBE AND BUSHING

DETAIL Q



AN3C6A BOLT (1)
AN960C10L WASHER (1)
NAS1515H3L WASHER (1)
(4 PLACES)

D2750-043/-044 ASSEMBLY
D2750-043 SHOWN (D2750-044 OPPOSITE)

BOND D2739 WEB INTO D2750-3 (OR D2750-4)
OUTER TUBE WITH NON-STRUCTURAL
SIKAFLEX-241 ADHESIVE PER DART QSI 015.
NOTE: ENSURE THAT HOLES LINE UP.

BLACK ANTI-SKID

SEE DET. M

SEE DET. P
SEE DET. N

D3488-041
(OR D3488-042)

D2741

NO INSERT

WELDED SPACER
NOT REQUIRED

SEE DET. K

SECTION T-T

D3490-1 SPACER

Ø0.500 HOLES ONLY

D3492-041 PLUG ASSEMBLY

SECTION U-U

D3490-5 SPACER

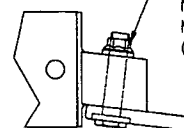
Ø0.313 HOLES ONLY

D3492-045 PLUG ASSEMBLY

WELDING INSTRUCTIONS

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D3490-5 SPACER (4 PLACES) INTO Ø0.313 HOLES OR INSERT D3490-1 SPACER (4 PLACES) INTO Ø0.500 HOLES
3. WELD INTO PLACE
4. GRIND FLUSH
5. INSERT D3492-045 PLUG ASSEMBLY (8 PLACES) INTO D3490-5 SPACER OR INSERT D3492-041 PLUG ASSEMBLY (8 PLACES) INTO D3490-1 SPACER ON BOTH ENDS

DETAIL N



AN8C21A BOLT (1)
AN960JD816L WASHER (1)
NAS1515H8L WASHER (1)
MS21083C8 NUT (1)
(2 PLACES)

COPYRIGHT © 1986 BY DART AEROSPACE USA, INC.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL
AND IS SUPPLIED ON THE EXPRESS CONDITION
THAT IT IS NOT TO BE USED FOR ANY PURPOSE
OR COPIED OR COMMUNICATED TO ANY OTHER
PERSON WITHOUT WRITTEN PERMISSION FROM
DART AEROSPACE USA, INC.

DESIGN	DH	DRAWN BY	DH	DART DART AEROSPACE USA, INC. PORT HADLOCK, OH
CHECKED	#	APPROVED	#	DRAWING NO. D2750
DATE	06.01.05	TITLE	350 SKIDTUBE ASSEMBLY	REV. D SHEET 5 OF 5 SCALE 1:20

SHOP COPY
RETURN TO
ENGINEERING
CONTROLLED COPY
SUBJECT TO ATTENDMENT
WITH OUT NOTICE
WORK ORDER
NO. 33394

NO. 130

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name Barclay Elliot
Joint Welding Procedure t.g
Part number and Job number D350 630 01 / B33961

TEST WELDS REQUIRED

BASE METAL Aluminium WELDING PROCESS t.g
Penetration Complete ☐ Partial ☒ Single Weld ☒ Double Weld ☐
Current AC ☒ DC ☐ Backing YES ☐ NO ☒

	Position		Vertical Down <input type="checkbox"/> Up <input type="checkbox"/>	
Sheet Groove	1G <input type="checkbox"/>	2G <input type="checkbox"/>	3G <input type="checkbox"/>	4G <input type="checkbox"/>
Tube Groove	1G <input type="checkbox"/>	2G <input type="checkbox"/>	5G <input checked="" type="checkbox"/>	6G <input type="checkbox"/>
Sheet Fillet	1F <input type="checkbox"/>	2F <input type="checkbox"/>	3F <input type="checkbox"/>	4F <input type="checkbox"/>
Tube Fillet	1F <input type="checkbox"/>	2F <input type="checkbox"/>	4F <input type="checkbox"/>	5F <input type="checkbox"/>

Crossbolt Spacer Welded into Skidtube

TEST RESULTS

Visual Pass ☒ Fail ☐
Penetration Pass ☒ Fail ☐
Crossbolt Spacer Pass ☒ Fail ☐

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

Date of Test Coupon 07-10-09

Qualifier P.A. Dail